MDOT
Michigan Department of Transportation

OFFICE MEMORANDUM

DATE: November 22, 2005

TO: Ed Timpf, Division Administrator
Financial Operations Division

FROM: Sonja Scheurer, Administrative Manager
Operations Administrative Services

SUBJECT: **Reporting Requirements for FY 2006 Operating Appropriation Act**

In accordance with Public Acts of 2005, Public Act 158, Section 384 the department is required to report on three components of the intelligent transportation service center for FY 2005.

Public Act 158, Section 384 (1), requires the department to report on the operations of the intelligent transportation service center. Public Act 158, Section 384 (2), requires the department to submit copies of agreements between the department and all private and public organizations. Public Act 158, Section 384 (3), requires the department to submit copies of policies for public and private access to the service center. To ensure compliance of these reporting requirements, attached is the following documentation: Summaries of our responses, the FY 2005 annual report, current contracts, and policies for access to the service center.

If you have any questions or concerns, please feel free to contact me at (517) 335-2258.

Sonja Scheurer

cc: L. Hank
L. Tibbits
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File

MDOT – INTELLIGENT TRANSPORTATION SERVICES CENTERS

Reporting Requirement

PA 158, Section 384 (1) states the following: From the funds appropriated in part 1, the department shall prepare a report on the operations of intelligent transportation service centers for the preceding fiscal year. The report shall include a description of all operations by service center location, a listing of contractor services provided at each service center location, and a listing of organizations, both private and public, that have access to the information generated at each service center location. The report shall be submitted to the senate and house of representatives appropriations transportation subcommittees by December 1, 2005.

Response

MDOT currently operates one intelligent transportation service center, which is located in Detroit, Michigan (MITS Center). A copy of the annual report, outlining the services provided, is attached.

There are three service areas that were served by five contractors during Fiscal Year 2005 at the MITS Center. These contracts are:

Freeway Courtesy Patrol

- Emergency Road Response (ERR)
- AAA

Control Center Operations

- Dunn Engineering, Inc.
- URS Corp, Great Lakes

Field Maintenance

- Transcore

The following organizations have direct access to the information generated at the MITS Center:

Organizations with access to video images. (Note – Video images are provided on the public MDOT web site and are available for "mining" from third parties, requiring no approval or agreement from MDOT, thus others may be using the video images posted to the web site that are not included in this list).

- Road Commission for Oakland County
- Road Commission of Macomb County
- WDIV
- WJBK
- WXYZ
- WWJ

Organizations with access to data. (Note – Processed data is provided on the public MDOT web site and is available for "mining" from third parties, requiring no approval or agreement from MDOT, thus others may be using the information posted to the web site that are not included in this list).

- Road Commission for Oakland County
- Southeast Michigan Council of Governments (SEMCOG)
- Cambridge Systematics (at the request of SEMCOG for use in the annual Texas Transportation Institute Mobility Monitoring study)
- Dunn Engineering (Contract attached) and their sub consultants process the raw data at the MITS Center and post the data to the MDOT web site.
- Traffic.com (formerly Mobility Technologies) (Contract attached)

Reporting Requirement

PA 158, Section 384(2) states the following: By December 1, 2005, the department shall submit copies to the senate and house of representatives appropriations transportation subcommittees of all agreements, including memoranda of understanding, between the department and all private and public organizations that have access to each service center location.

Response

To date, only two organizations have an agreement to use the data and/or video from the MITS Center, Dunn Engineering and Traffic.com (formerly Mobility Technologies). Those agreements are attached.

Reporting Requirement

PA 158, Section 384(3) states the following: By December 1, 2005, the department shall establish uniform policies for public and private access to each service center location. Copies of these policies shall be submitted to the senate and house of representatives appropriations transportation subcommittees.

Response

The Michigan Department of Transportation has established a uniform policy to provide access to the data and video at each service center location. Opening up the data and video to additional sources requires significant changes in the data and video processing techniques and technologies currently in use, which must be coordinated with the policies and agreements in place with the public and private sector to ensure that proper expectations are met.

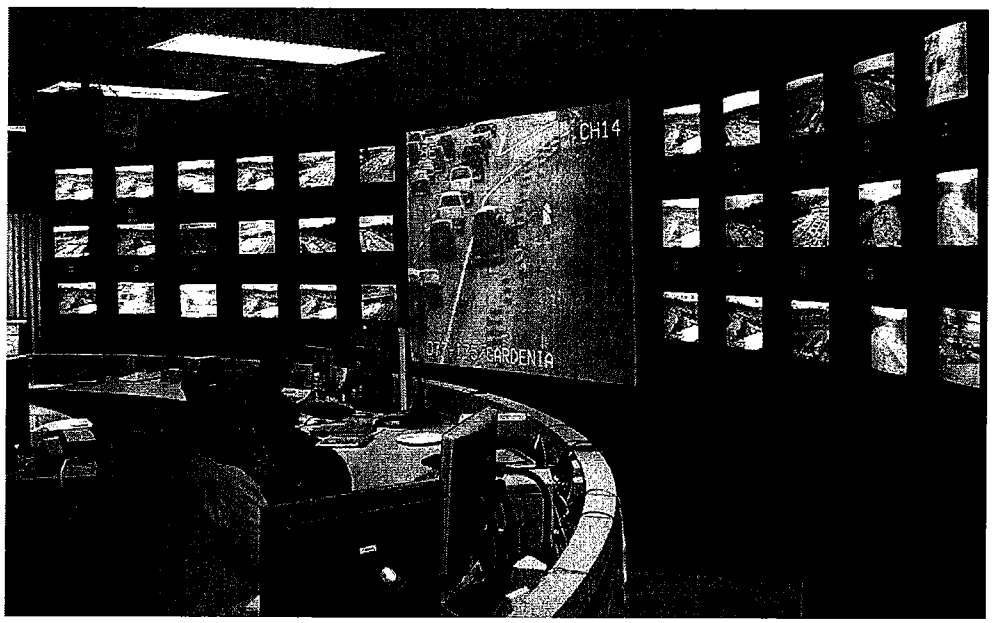
Public and private access agreements between MDOT and private sector agencies desiring video and data are attached. The Attorney General's Office is finalizing comments on agreement provisions.

The key components of the information sharing policy for MDOT are:

- MDOT makes no warrantee regarding the quality or accuracy of the data or video.
- MDOT may disrupt the flow of data or video at any time should the need arise for homeland security, privacy or other issues.
- The recipient agrees to provide credit to MDOT for the use of the data or video.
- The recipient agrees to use the data and video to accurately report on and reflect traffic operational conditions.
- The recipient agrees not to share the data or video with third parties, unless the agreement expressly grants them permission to do so. This includes selling data or video images to the public or a third party.
- The recipient bears all of the costs associated with the data or video transmission.
- The recipient bears all of the costs associated with any hardware or software necessary to read, transmit, receive, process and display the data and video.
- Any hardware or software installed by the recipient at MDOT facilities shall not interfere with the normal working operations of the infrastructure at any MDOT facility.
- The recipient is responsible for any costs incurred by MDOT to set-up, install, operate, maintain or trouble shoot any portion of the system, if it is determined that the issue being investigated or fixed is not MDOT's responsibility.
- MDOT reserves the right to charge the recipient for the future use of the data or video in the future to cover the full cost or a portion of the full costs associated with the installation, operations and/or maintenance of the ITS infrastructure in the road or in the operations center.
- Both MDOT and the recipient have the ability to terminate the agreement either for cause or for convenience.

2005 ANNUAL REPORT

OPERATION OF MICHIGAN INTELLIGENT TRANSPORTATION SYSTEMS CENTER



Prepared by:

Dunn Engineering Associates, P.C.

Prepared for:

Michigan Department of Transportation

PURPOSE

This document presents an annual report of Michigan Intelligent Transportation Systems Center (MITS Center) operations during Fiscal Year 2005. Michigan DOT (MDOT) operates the MITS Center, a 24/7 transportation management center co-located with Michigan State Police Second District Regional Dispatch. The MITS Center collects and disseminates travel information across approximately 200 miles of freeway in the Detroit Metropolitan Area. Data collection resources include 164 closed-circuit television cameras, 2,600 mainline loop sensors, the Freeway Courtesy Patrol (FCP), the Michigan State Police, media partners, and other local and county agencies. MITS Center operators manage incidents, dispatch FCP, and disseminate real-time travel information via 63 permanent changeable messages signs (CMS) and other means.

This report summarizes key MITS Center performance measures and operations highlights for the fiscal year. MDOT Freeway Operations, supported by Dunn Engineering as consultant for MITS Center control room operations, increased MITS Center operating efficiency, improving the performance and safety of the metro area freeway system, and strengthened interagency cooperation and collaboration in order to enhance regional transportation system operations. As the region prepares for and responds to several major planned special events that has placed Detroit in the national spotlight, MDOT Freeway Operations has led numerous successful initiatives to better position the MITS Center and other stakeholder resources in proactively supporting the following four operations focus areas: (1) traffic incident management, (2) planned special events traffic management, (3) roadway construction, and (4) Freeway Courtesy Patrol operations. After an overview section on control room operations and general MDOT Freeway Operations activities, the organization of this report follows the identified focus areas, and it is configured to allow for fast access to and easy extraction of important information summarizing program statistics, activities, and products.

OPERATIONS OVERVIEW

This section summarizes highlights of operations performance, activities, and initiatives over the year that affect multiple operations focus areas.

Control Room Communications

MITS Center control room operators maintain a call log of all incoming and outgoing telephone calls to the control room. Table 1 lists the total number of control room calls per month for the current and recent years. The number of control room calls is an indicator of control room activity, including incident frequency, dispatch volume, and other factors. Operators handled 58,719 calls in FY 2005. Table 2 lists the total number of incidents sent to the website for the current and recent years.

Table 1
Summary of MITS Center Communications and Comparison to Recent Years

MONTH	CONTROL ROOM CALLS				
	FY2003	FY2004	% CHANGE 03-04	FY2005	% CHANGE 04-05
October	n/a	5,088	n/a	4,677	-8%
November	n/a	3,986	n/a	4,894	+23%
December	n/a	5,519	n/a	4,679	-15%
January	n/a	6,002	n/a	3,779	-37%
February	n/a	3,866	n/a	3,473	-10%
March	2,998	6,017	+101%	3,513	-42%
April	3,210	4,364	+36%	5,099	+17%
May	3,237	5,568	+72%	4,734	-15%
June	4,274	5,522	+29%	5,720	+4%
July	3,796	5,057	+33%	6,795	+34%
August	4,671	5,485	+17%	5,896	+7%
September	3,295	5,281	+60%	5,460	+3%
Yearly Total	**25,481**	**61,775**	**+48% (last 7 months)**	**58,719**	**-5%**

n/a = data not available

Table 2
Summary of Incidents Sent to the Website and Comparison to Recent Years

MONTH	INCIDENTS				
	FY2003 TOTAL	FY2004 TOTAL	% CHANGE 03-04	FY2005 TOTAL	% CHANGE 04-05
October	n/a	494	n/a	625	+27%
November	n/a	518	n/a	610	+18%
December	n/a	629	n/a	874	+39%
January	n/a	708	n/a	838	+18%
February	n/a	473	n/a	705	+49%
March	703	612	-13%	705	+15%
April	515	537	4%	574	+7%
May	413	543	31%	530	-2%
June	581	558	-4%	638	+14%
July	487	612	26%	524	-14%
August	502	629	25%	491	-22%
September	393	601	53%	468	-22%
Yearly Total	**3,594**	**6,914**	**+14% (last 7 months)**	**7,582**	**+10%**

n/a = data not available

Table 3 presents a distribution of control center calls by agency. A staple of day-to-day control room operations involves operators communicating in real-time with FCP operators and State Police as traffic incidents unfold. Operators routinely detect traffic incidents, coordinate response by FCP and State Police, and monitor incident removal operations for the purpose of updating CMS messages and FCP status. The State Police calls include incidents reported through the MSP Computer Aided Dispatch (CAD). Maintenance calls are with the ITS

Maintenance technicians. An example of an agency classified as "other" includes public parking facility operators who may communicate with MITS Center operators on parking occupancy levels and "lot full" status during major planned special events.

Table 3
Distribution of MITS Center Control Room Telephone Calls

MONTH	FWY. COURTESY PATROL		MDOT	MEDIA	STATE POLICE	MAINT.	LOCAL POLICE	OTHER	Const.
	FROM	TO							
Oct. 2004	1915	911	11	166	713	874	5	13	69
Nov. 2004	2111	818	114	659	1061	15	10	103	3
Dec. 2004	1793	755	94	669	1290	15	9	52	2
Jan. 2005	1387	566	84	617	1049	17	5	53	1
Feb. 2005	1428	615	64	459	856	7	3	35	6
Mar. 2005	1139	610	95	546	994	12	5	69	43
Apr. 2005	1846	959	115	722	1254	10	6	108	79
May 2005	1748	963	115	554	1089	10	7	94	154
Jun. 2005	2172	1416	106	662	1089	26	15	127	107
Jul. 2005	2745	1069	127	680	1804	23	26	175	146
Aug. 2005	2294	1059	103	785	1493	35	8	3	116
Sep. 2005	2099	970	87	747	1401	18	7	104	117
Yearly Total	**22,587**	**10,711**	**1,115**	**7,266**	**14,095**	**1,062**	**106**	**936**	**843**

MDOT Freeway Operations responded to five out of eight activated AMBER Alerts in the region by displaying CMS messages bearing vehicle description information communicated and verified by State Police. The other three did not have sufficient vehicle information to display a message.

Incident Management and Traffic Information

Table 4 lists the total number of incidents entered per month for the past and recent years. Incidents entered are posted to the real time traffic information website hosted by Metrocommute for MDOT, at www.michigan.gov/metrodetroittraffic.

High impact incidents, including freeway closures, interchange closures, and lane closures reducing capacity to one lane, are disseminated via broadcast email. E-mail notifications, or advisories, are sent out during management of major incidents to media subscribers, transportation operators, MDOT staff and others to inform them of high impact incidents. Table 4 summarizes the number of major freeway and ramp closures per month for this year and the previous year. This is excluding major lane closures because they were not implemented until the end of FY2004. A complete list of the freeway and ramp closures and their locations can be seen in Appendix A for FY 2004 and Appendix B for FY 2005.

Table 4
Freeway and Ramp Closures Comparison to Previous Year

Months	FY04 Total	FY05 Total
October	10	14
November	16	17
December	13	32
January	13	20
February	10	27
March	18	19
April	8	19
May	17	14
June	29	27
July	27	17
August	34	20
September	22	15
Total	217	241

Each high impact freeway, lane, and ramp closure is checked for accuracy. Table 5 illustrates the accuracy of the operator's actions for the closure. The advisory e-mail reviewed for content accuracy. The "wording correct" column identifies if the wording on the CMSs was correct and consistent with the incident details. The quality control process verifies that the message was displayed on the correct signs and if the message expired while the incident was still ongoing. The column labeled "incident correct" indicates if the information sent to the website was consistent with the advisory.

Table 5
All Closures Accuracy Percentage

2005 MONTHLY QC CLOSURE SUMMARY						
MONTHLY ACCURACY PERCENTAGE						
MONTH	CLOSURE TOTALS	EMAIL CORRECT	WORDING CORRECT	CORRECT SIGNS	MESSAGE EXPIRE	INCIDENT CORRECT
OCTOBER	14	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
NOVEMBER	26	100%	100%	65%	100%	96%
DECEMBER	55	95%	100%	85%	91%	100%
JANUARY	62	98%	100%	82%	95%	100%
FEBRUARY	59	98%	100%	85%	95%	95%
MARCH	58	95%	100%	90%	98%	91%
APRIL	70	93%	94%	89%	100%	87%
MAY	51	94%	96%	90%	100%	88%
JUNE	71	87%	97%	96%	100%	94%
JULY	43	98%	93%	93%	100%	93%
AUGUST	50	94%	96%	96%	100%	90%
SEPTEMBER	46	93%	98%	98%	98%	96%
AVERAGES	605	94%	97%	88%	97%	91%

Website usage statistics reporting was implemented in July. Some key statistics indicating website usage are shown in Figure 1 and Figure 2 below. Additional cameras were added to the website in July, bringing the total number of cameras on the site to 22.

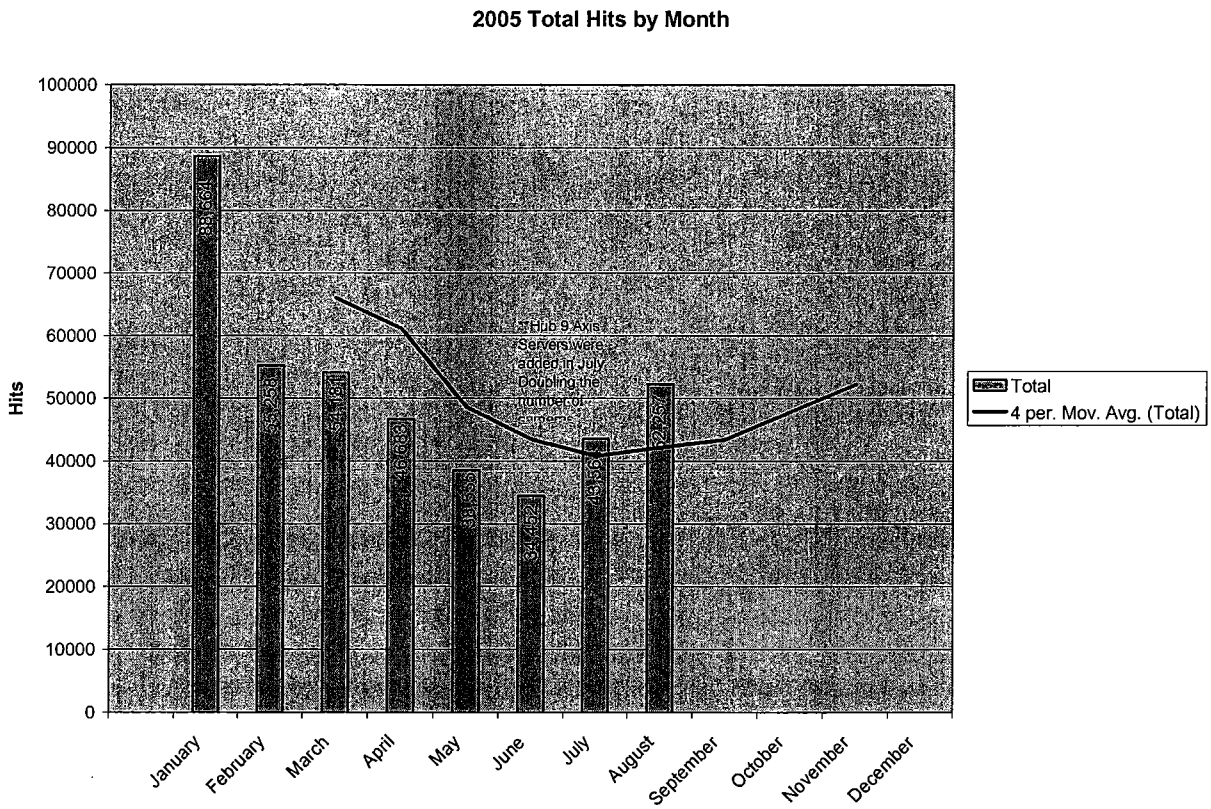


Figure 1
Website Hits

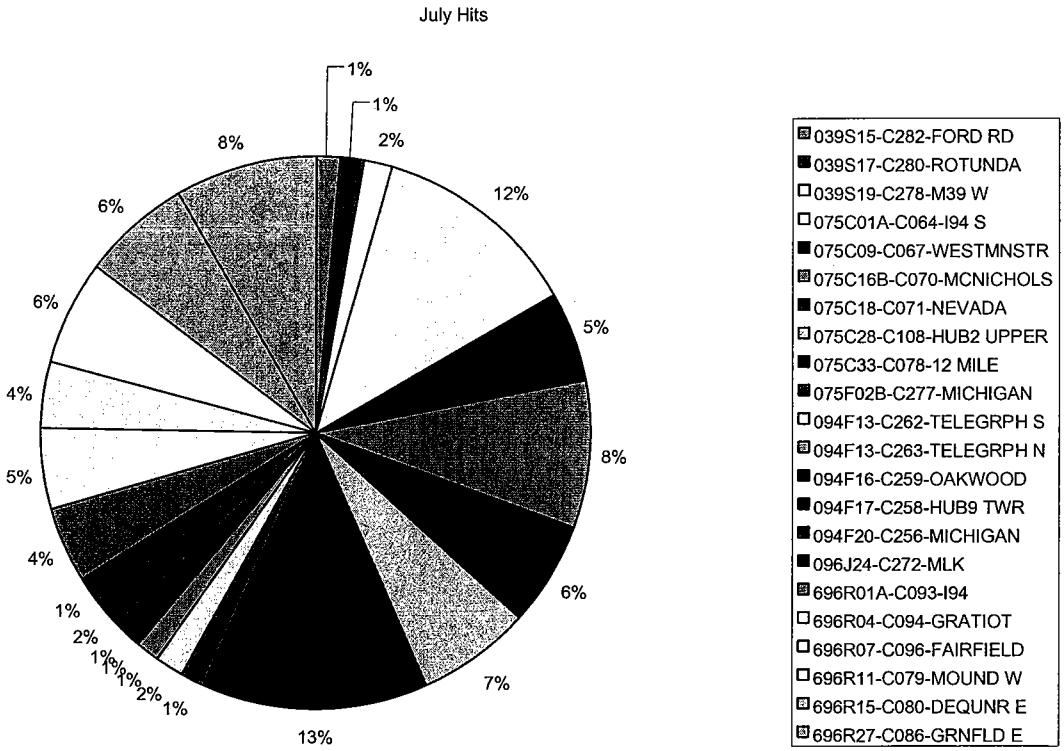


Figure 2
Website Camera Usage

CCTV Video Operations

MDOT Freeway Operations, supported by TransCore as consultant for ITS Maintenance, realized several improvements in CCTV video operations over the fiscal year. Improvements include field equipment upgrades, MITS Center upgrades, and communications upgrades, as well as some operations procedures enhancements.

Field equipment upgrades include restoration and upgrade of five (5) freeway camera sites in Detroit, three on I-94 between I-96 and I-75, and two on M-10 at Martin Luther King Blvd. and West Grand Blvd. Camera shots from two of these cameras are shown in Figure 3. An additional five (5) cameras were relocated or replaced under road and bridge construction projects during the year, and a web based camera was deployed at the high volume round about on M-53.

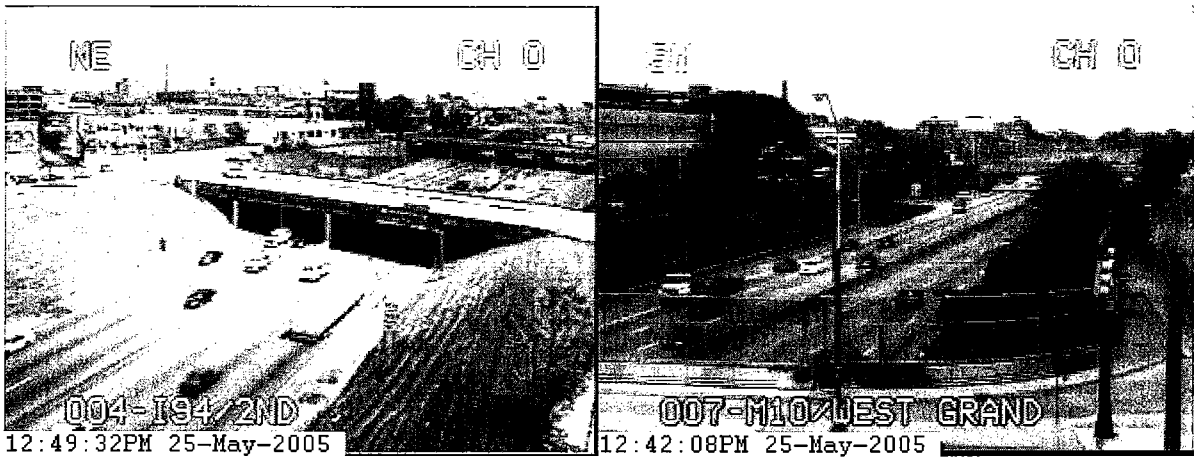


Figure 3
Camera Images

MITS Center equipment upgrades include video wall upgrades, isolating video feed equipment for media, and an extensive re-cabling project. Figure 4 shows the re-cabling project in progress; operational impact was minimized by providing temporary access to 16 monitors of video during the switchover week, maintaining CCTV operation for MDOT, MSP, and media partners. Video wall upgrades include TV monitors, fully functional CCTV monitors, and the new projector screen.

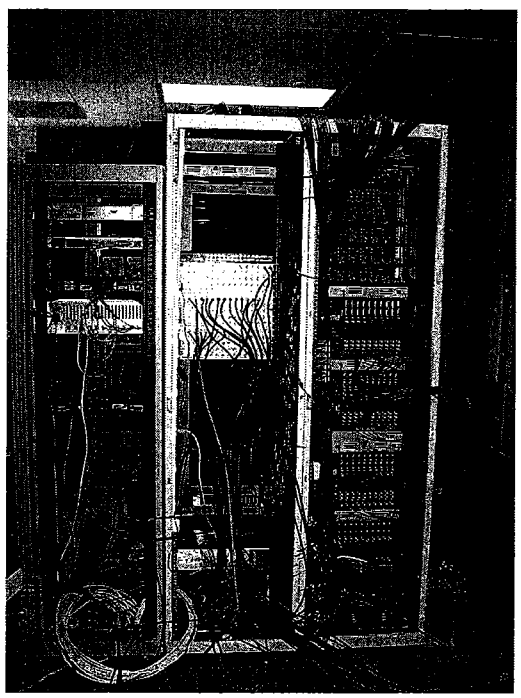


Figure 4
Re-wiring in progress

Operations enhancements, supported by equipment upgrades in the field, include implementation of web based video access and expansion of web based cameras. In addition, camera pre-sets were implemented on a system-wide basis.

Operator Preparedness

In maintaining the state-of-the-art in transportation management center operations, the MITS Center has implemented various technology applications and operational functions to enhance control room operator monitoring of freeway conditions. The continuously evolving technologies, resources, and functions demand frequent review of operating procedures and special details (e.g., roadway construction support, planned special event operations, etc.) by control room operators and supervisors. Training of control room staff took place during November 2004, March 2005, April 2005, and July 2005 to update and train all operators on the changing and updated technology and procedures.

Key Activities

Table 6 lists key activities performed by MDOT Freeway Operations during FY 2005 to expand MITS Center functions and improve day-to-day operations that collectively work to achieve better freeway system safety and performance and increased public reliance on disseminated traveler information.

Table 6
Summary of Key Activities for Improving MITS Center Day-to-Day Operations

MONTH	ACTIVITY
Oct. 2004	• "Call to Win" program, outreach targeted to MDOT Metro Region staff to enhance freeway operations. • Messages for Canadian strike causing delays at the border crossings. • Implement revised travel time messages on I-94.
Dec. 2004	• Replace nine cube video display with a projector. • Tree trimming for increased line of sight of cameras. • Implemented the use of freeway open messages when construction opens ahead of schedule.
Jan. 2005	• Review evacuation message plan.
Feb. 2005	• Move the fourth workstation to the control room for daily use. • Two new CAD monitors installed as clones to the one CAD computer. • Start the full rollout of message library cleanup to get accurate and consistent messages and sign selection for all incident types (accident, disabled vehicle, debris, ramp closure, or freeway closure).
Mar. 2005	• Activate blank monitors on the video wall, bringing the number of monitors from 25 to 34. • Add a fourth Kalatel camera control keypad.
Apr. 2005	• Add MSP CAD computer (total is 2 CAD computers plus 2 clone monitors to extend reach to all workstations.
	• Two new operator positions filled with focus on FCP dispatching.
Jul. 2005	• "Enter to Win" program, outreach targeted to MDOT/MSP MITS Center staff
Aug. 2005	• Implement MS Access program to simplify review of planned messages.
	• Implement FCP route maps for better coverage.
	• First issue of MITSC Connect, monthly newsletter for MDOT/MSP

MONTH	ACTIVITY
Sep. 2005	• Implement camera directional presets system-wide for operator ease and use. • Develop CMS location map, GIS based on State map base map.

TRAFFIC INCIDENT MANAGEMENT

MDOT Freeway Operations actively participates in incident management activities both in the control room and with multi-agency committees to enhance incident management and improve communications, cooperation and coordination throughout the region. The Incident Management committee meets regularly to discuss subcommittee activities and discuss incident management topics to facilitate safer and more efficient operations in the field.

Subcommittees under the Incident Management committee include Freeway Operations, Freeway Courtesy Patrol Operations, Arterial Incident Management, and the Incident Management Planning subcommittees. The focus of the Freeway Operations subcommittee has been to improve incident management practices through incident debriefings and outreach efforts. Key benefits from incident debriefings include incident response plan (closure point) for express lane closures, improved Courtesy Patrol vehicle markings, further consideration to response vehicle positioning, cones distributed to FCP vehicles, improved coordination with MSP event contingency planning, improved access for work zone incident response, development of checklists for dispatch operations, and coordination of topside traffic direction, among others. Table 7 lists key activities supporting enhancement of incident management practices during FY 2005.

Table 7
Key Activities Supporting Enhancement of Incident Management Practices

MONTH	ACTIVITY
Nov. 2004	• NTOC webcast, "Making the Case for Incident Management" • Incident management support services contract with Hubbel, Roth & Clark
Dec. 2004	• Web based calendar established for operations meetings. • NTOC webcast, "Work Zone Management Strategies"
Jan. 2005	• Abandoned vehicle strategy meeting, MDOT, MSP and SEMCOG. • NTOC webcast, "Planned Special Event Traffic Management"
Feb. 2005	• Incident response strategies for work zone with restricted access, including communication with responders and improved access for FCP.
Mar. 2005	• FHWA TIM Self Assessment update • Travel to Milwaukee (MDOT and MSP) to share best practices for incident management and review incident response vehicle. • Compiled Quick Clearance reference information for executive review.
Apr. 2005	• NTOC webcast, "Performance Measures"
May 2005	• Incident debrief for Stroh's curve closure.
Jul. 2005	• Video sharing rolled out to responders in I-94 work zone (Dearborn, Allen Park, MSP/Taylor) • Presentation from European scan tour for incident management
Aug. 2005	• Video sharing with St. Clair Shores PD • MDOT travel to Atlanta to share best practices for incident management and review incident response vehicle. • Reviewed incident response strategies with Macomb County responders
Sep. 2005	• Preliminary approval of abandoned vehicle tagging protocol.

Outreach efforts continue to be a focus area for improved incident management, in order to expand awareness of MDOT Freeway Operations infrastructure and services and to enhance coordination across agencies responding to incidents throughout the region. Outreach efforts in the past year include MITS Center tours, incident specific follow up with local agencies, expanded dispatch to dispatch communications, leveraging relationships developed with planned special events activities. Awareness of MITS Center and benefits of enhanced incident management has also been raised through Freeway Operations subcommittee meetings targeted to specific local needs.

Video sharing further extends the benefit of the MDOT freeway cameras by enabling access from any internet website. Communications between dispatch centers and MITS Center control room operators is enhanced with use of this system as well. Over FY 2005, six (6) agencies have been introduced to the video sharing tool, with additional agencies coming on line throughout the coming year. Figure 5 shows the user interface for the website.

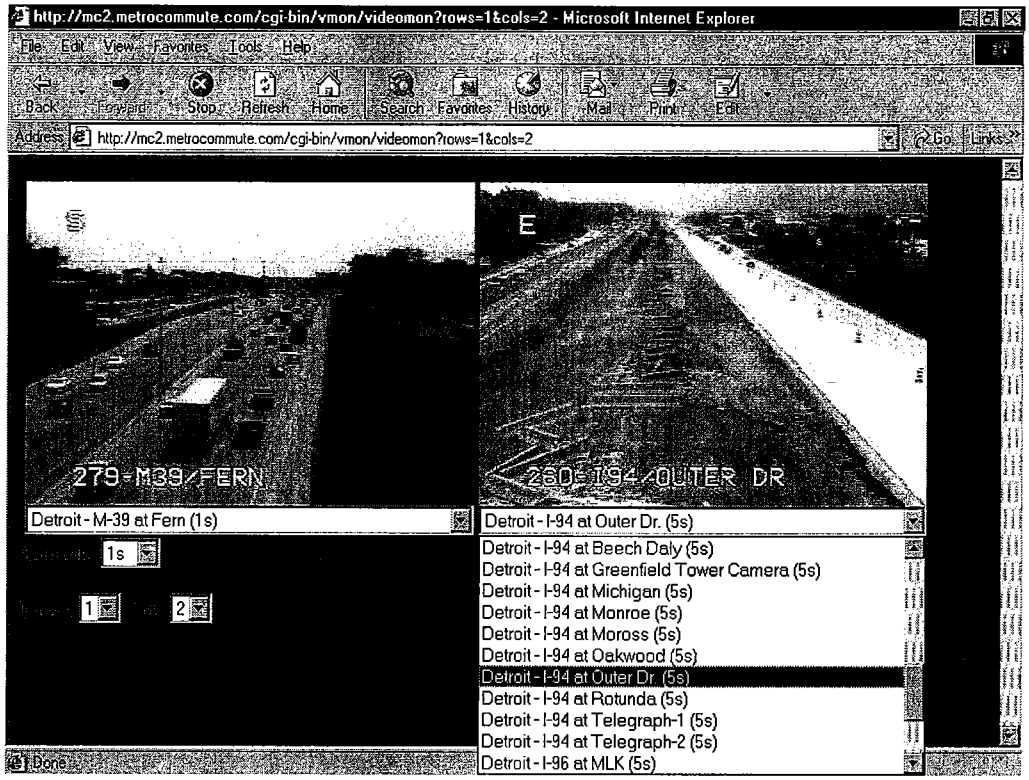
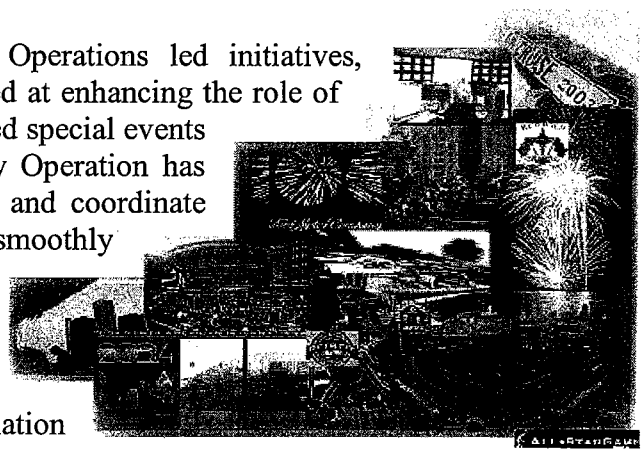


Figure 5
User Interface for the Website

PLANNED SPECIAL EVENTS TRAFFIC MANAGEMENT



This section highlights various MDOT Freeway Operations led initiatives, yielding planned activities and new products, directed at enhancing the role of the MITS Center in managing travel for major planned special events in the Detroit Metropolitan Area. MDOT Freeway Operation has coordinated with stakeholders to share information and coordinate between agencies to accomplish a common goal of a smoothly flowing event. The MITS Center has many functional capabilities that support a coordinated and collaborative stakeholder effort in managing travel for all planned special events in the metro area, including: (1) dissemination of traveler information through CMS messages, (2) performance of freeway traffic conditions monitoring through CCTV and system detector monitoring in addition to two-way communication with FCP operators, and (3) coordination of Freeway Courtesy Patrol for enhanced traffic incident management.

With MLB All Star events in Detroit in July, 2005 and Superbowl XL coming to Detroit in February, 2006, special emphasis has been placed on streamlining resources through coordinated planning, as well as capturing and leveraging lessons learned for improved traffic operations during events.

The stakeholder base for special event planning has expanded to include active participation from public and private sectors operators around the region, including local police and fire, local road agencies, state police, event coordinators, transit, and border operators and agencies. MDOT Freeway Operations teamed with Detroit Police Department Special Operations to host nearly bi-weekly meetings for the months leading up to MLB All Star. Information was disseminated to stakeholders at meetings and via email and a reference CD with maps, event timelines, stakeholder contact information, as well as relevant after action reports. This process continues into the current fiscal year in preparation for Superbowl XL.

Table 8 summarizes key MDOT Freeway Operations activities that support planned special events traffic management.

Table 8
Summary of Key MDOT Freeway Operations Activities for Planned Special Events Traffic Management

MONTH	ACTIVITY
Oct. 2004	• Implemented GroupWise shared calendar for tracking Planned Special Events within MDOT. • Planning meeting for Thanksgiving Day Parade.
Nov. 2004	• Planned and implemented a messaging plan for Thanksgiving events.
	• Developed FCP operations detail for Thanksgiving Day and the Friday after Thanksgiving in response to anticipated high freeway traffic volume during peak periods of event/shopping ingress and egress.
	• Included information on the internet homepage of MDOT to inform motorists of the traffic impact due to the special events under the Spotlight heading.
Dec. 2004	• Developed a CMS message plan for the 2005 North American International Auto Show (NAIAS) that primarily contained messages designed to identify target exit ramps for accessing NAIAS parking facilities. The plan consisted of a single-stage plan for the Charity Preview Event and a four-stage, scenario-based plan for the Public Show and Winter Blast. Event messages were displayed, as defined in the CMS message plan per real-time conditions, during the NAIAS.
	• Presented at and attended the first Planned Special Events Conference in New Orleans, Louisiana, to discuss best practices and lessons learned from other agencies across the country on planned special events.
	• Participated in an after action review of Thanksgiving and prepared an After Action report.
Jan. 2005	• Prepared for and implemented plans for the 2005 NAIAS and Winter Blast. This included the CMS message plan, PCMS locations, and trailblazer locations, as well as other coordination activities.
Feb. 2005	• Prepared an after-action report for the 2005 NAIAS and Winter Blast that contains key successes and lessons learned.
	• Met with DPD to develop strategies for Tigers opening game traffic plan.

MONTH	ACTIVITY
Mar. 2005 to Jul. 2005	• Deployed traffic control devices topside for outbound traffic from stadium per Opening Day traffic control plan, left in place through MLB All Star. • Planned, coordinated and staged traffic control devices at freeway closure points for scheduled and potential freeway closures related to three (3) consecutive high impact events (Summer Jamz, Fireworks, MLB All Star). • Deployed traffic control devices topside for outbound traffic for Fireworks. • Coordinated with MDOT construction program for scheduled road work openings and closures during the MLB All Star time frame. • Organized day of event contact list for MLB All Star events. • Day of event traffic monitoring for high impact events, and multi-agency after action reviews.
Aug. 2005	• Developed a multi agency traffic plan for the fireworks. • Supported Woodward Dream Cruise, State Fair with CMS messages and expanded FCP coverage.

Maps to Support Planned Special Events

Several maps were developed and shared with stakeholders to support planned special event traffic management planning, implementation, and coordination. Figure 6 is the base map for the downtown area. In addition, maps indicating traffic control device locations, event venue access, egress traffic flow, law enforcement were utilized over the year. Information was added on GIS layers to the base map as needed to support the purpose. In addition, aerial survey plots were used for the key freeway segment to facilitate development of contingency plans and traffic control plans.

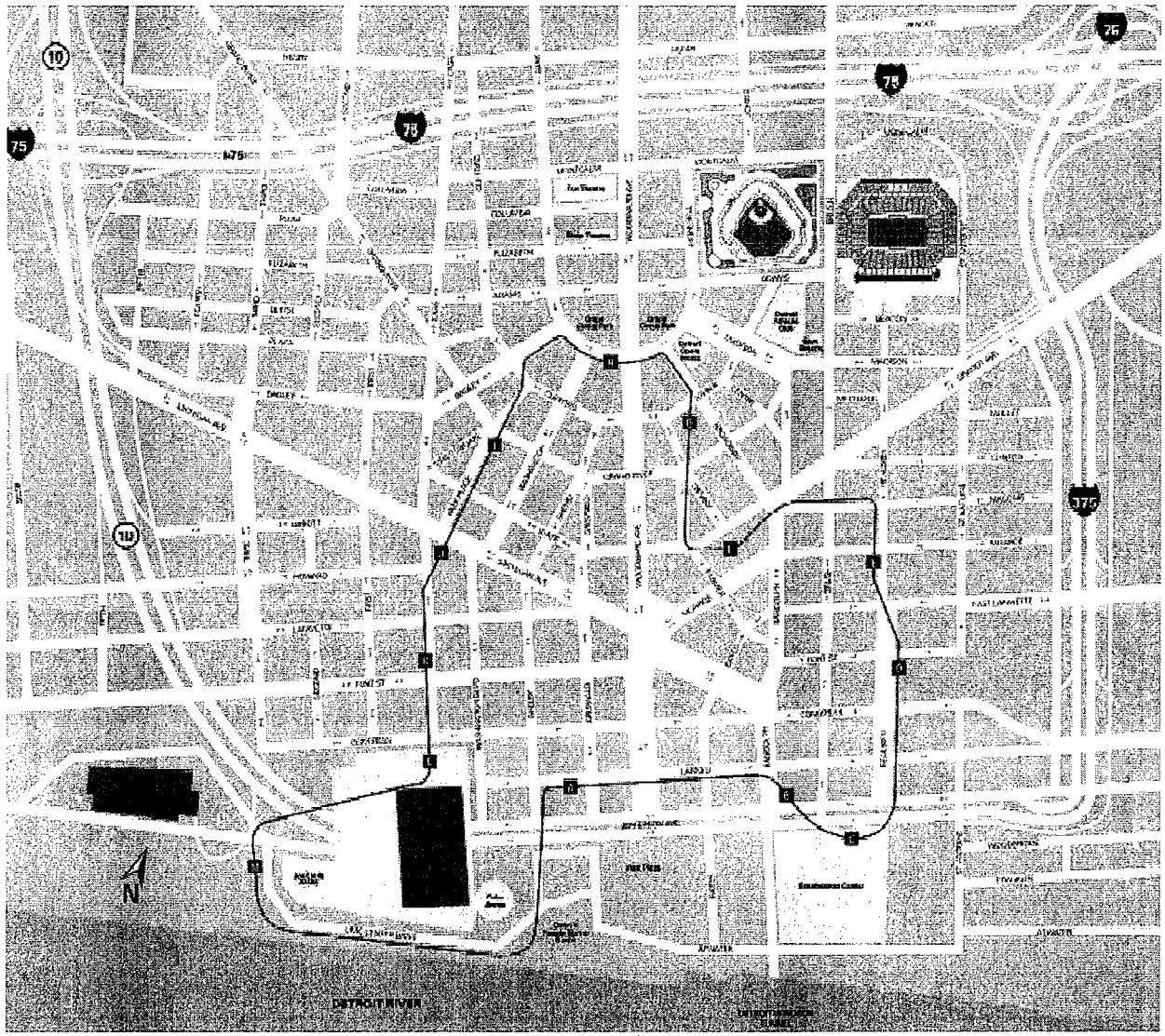


Figure 6
Downtown Base Map

Documentation developed to support planned special event traffic management include a new section in the MITS Center Operations manual, a comprehensive after action report for 2005 North American International Auto Show (NAIAS) and Motown Winter Blast, a coordinated Fireworks traffic management plan, and summary notes from the MLB All Star game after action review.

MITS Center Operations Manual Section on Planned Special Events

MDOT Freeway Operations developed a new section of the MITS Center Operations Manual that provides guidelines and procedures on potential advance planning and day-of-event operations activities performed by MDOT Freeway Operations (e.g., MITS Center managers, supervisors and operators) in direct response to the potential impact of planned special events on the normal operation of the freeway system.

The main objective of freeway operations management during planned special events involves minimizing freeway mainline congestion. The MITS Center has the following functional capabilities that support a coordinated and collaborative stakeholder effort in managing travel for all planned special events in the metro area: (1) disseminate traveler information, (2) perform freeway traffic conditions monitoring, and (3) coordinate Freeway Courtesy Patrol.

The new operations manual section on planned special events represents groundbreaking work by MDOT Freeway Operations in recognizing the benefits of proactively managing travel for planned special events and documenting associated guidelines and procedures in an operations manual. The section addresses the following major topics: (1) purpose and characteristics of planned special events, (2) freeway operations management issues and approach, (3) CMS message plan, (4) day-of-event operations detail for MITS Center operators, (5) day-of-event operations detail for Freeway Courtesy Patrol, and (6) planning process summary.

2005 NAIAS and Motown Winterblast After-Action Report

MDOT Freeway Operations prepared this comprehensive after-action report for the purpose of using it as a working document to assist in planning for future events. The integration of post-event evaluation results (e.g., stakeholder debriefings) to advance planning for the next (year's) event occurrence creates a seamless process allowing for continuous improvement of freeway system performance from one planned special event to the next. The results and recommendations presented in the MDOT Freeway Operations' report may also warrant application to other planned special events occurring in downtown Detroit.

The after-action report was organized into five major sections. The event background section summarizes key event statistics in addition to various tools and resources, not necessarily managed or operated by the MITS Center, which had either a direct or indirect impact on freeway operations during the event. The next section describes the role of MDOT Freeway Operations in the context of managing transportation system operations during the NAIAS. Sections on event operations planning and day-of-event operations document advance planning and day-of-event operations activities, respectively, performed at the MITS Center by MDOT Freeway Operations staff and control room personnel. These sections also present key successes and lessons learned as observed by MDOT Freeway Operations. The report concludes with a recommended planning process for the 2006 NAIAS and any other special event in the downtown area that present steps to overcome identified lessons learned and to improve advance planning activities and day-of-event operations.

Fireworks Traffic Management Plan

The Freedom Festival Fireworks is an annual event that draws nearly one million attendees to the Detroit riverfront. The Fireworks Traffic Management Plan was developed to provide a source to facilitate planning across agencies for this recurring event. This plan compiles key agencies (MDOT, MSP, DPD) operations plans for the event, and will be reviewed and utilitized in FY2006 to support event planning for the 2006 Freedom Festival Fireworks.

ROADWAY CONSTRUCTION

2005 marked the most annual construction activity to date, with multiple concurrent high impact construction projects. The construction program for 2005 was roughly $500M, and MDOT Freeway Operations served as a mitigating factor throughout the season. With the volume of roadwork, as well as MLB All Star and other planned special events in FY 2005, MITS Center roadway construction operations were more critical than ever. Roadway construction operations focus on Messaging, Monitoring & Communications.

Messaging

Messaging includes messages displayed on the CMS, as well as other information outlets. CMS construction messages involve careful prioritizing for time scheduled work that is location specific. In a given weekend, over 30 unique messages report road work activity relevant to traffic passing a particular CMS; a single closure can have 6 or more messages to provide motorists the best possible information throughout the network. Building on operations improvements from earlier years, new processes, tools, and quality control reviews were implemented in FY 2005 to ensure optimal messaging for road work closures.

Stretch goals identified towards the end of the 2004 construction season included alternate route messages where practical, detour traffic messages (where appropriate), warning messages for upcoming high impact (in addition to full freeway) closures, road open messages when freeway closures opened early, shoulder closure messages, and site specific traffic information where needed. All identified CMS messaging stretch goals were achieved during the 2005 season, and construction messages had higher quality due to new tools and processes for planning, implementation and reviews. In addition, MDOT Freeway Operations took a more active role in coordination of Portable Changeable Message Signs (PCMS) and static roadwork signing.

In addition to the CMS messages, MITS Center operators called traffic reporting meetings to prepare for future construction, report changes, early openings, and clarifications, as well as using the advisory notifications (via broadcast email). Feedback to the MDOT Lane Closure (web) report increased, and MITS Center operators have begun to add and update the information in the report when real time corrections are required and construction project personnel concur.

Monitoring & Communications

Outreach to contractors, consultants and MDOT staff involved in construction significantly benefited MDOT Freeway Operations by increasing the amount of communication with the construction projects.

Outreach strategies included

- continued distribution of the "Freeway Ops Contact Card"
- distribution of "Call Fwy Ops" coffee mugs (Figure 7)
- presentation at Region construction meeting in the spring
- presentation at the Statewide construction traffic control meeting with industry

- periodic emails with specific tips and general reminders
- feedback on specific events, both good and bad
- development of comprehensive construction contact list
- coordination and look ahead meetings with high impact projects

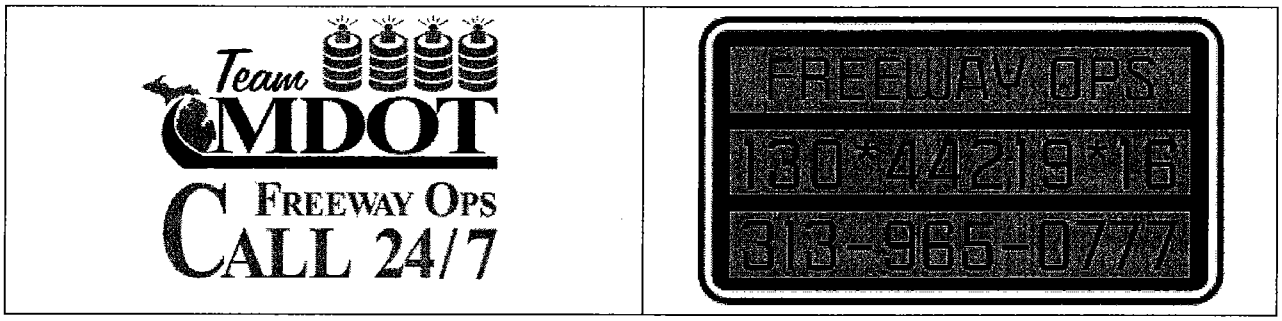


Figure 7
"Call Fwy Ops" Coffee Mugs

Monitoring and communications were enhanced with additional monitors on the video wall, as well as procedures for weekend operations summarizing planned changes in closures. Summary closure information was shared with MSP State Police for weekend construction activity.

FREEWAY COURTESY PATROL OPERATIONS

This section highlights various MDOT Freeway Operations led initiatives, yielding planned activities and new products, directed at enhancing FCP operations, FCP operator safety, and MITS Center capabilities in monitoring and dispatching FCP operations.

Contracts providing FCP services expired at the end of fiscal year 2005. Procurement for replacement contracted services leveraged available historical data and technologies, utilizing a performance based lump sum contract.

Freeway Courtesy Patrol Subcommittee

MDOT Freeway Operations hosted and co-led, with SEMCOG, Freeway Courtesy Patrol Operations Subcommittee meetings throughout the year. In FY 2005, the subcommittee: (1) reviewed, updated and revised the operational guidelines, (2) reviewed and discussed operational issues, (3) analyzed routes and coverage, and (4) delivered information to FCP drivers through an informational workshop.

Freeway Courtesy Patrol Operating Guidelines

MDOT Freeway Operations revised and produced a second edition of the FCP Operating Guidelines that specifies guidelines for FCP operations and response to incidents. The review and update process included input from FCP operators, FCP consultant, MITS Center control room staff, MSP and SEMCOG. The manual, designed for use by FCP operators in the field, includes the following sections: (1) normal operating guidelines, (2) incident approach guidelines, (3) incident departure guidelines, and (4) incident response guidelines.

Conclusion

The following four MDOT Freeway Operations focus areas were discussed in this report: (1) traffic incident management, (2) planned special events traffic management, (3) roadway construction, and (4) Freeway Courtesy Patrol operations, as well as an overview of control room operations performance and highlights. MDOT Freeway Operations continues enhancement of operations to increase MITS Center operating efficiency, improve the performance and safety of the metro area freeway system, and strengthen interagency cooperation and collaboration in order to enhance regional transportation system operations. MLB All Star events and preparation for Superbowl XL events have served as a catalyst for substantial increase in the level of communication and cooperation across agencies, benefiting not only planned special events traffic management but all areas of operations.

APPENDIX

Appendix A

Freeway	Direction	Location	Reason	Day	Date	Closed	Opened	Elapsed
October 2003								
I96	WB Local	Grand River/Schafer	Accident	Fri	10/03/2003	11:36	13:39	2:03
I94	EB	I75	Tanker Accident	Mon	10/06/2003	3:41	5:43	2:02
I94	WB	I75	Tanker Accident	Mon	10/06/2003	3:41	4:34	0:53
I275	SB	10 Mile	Vehcile Fire	Tues	10/07/2003	3:53	4:12	0:19
M10	SB	M39	Police Situation	Tues	10/07/2003	14:04	14:30	0:26
I275	SB	Ann Arbor Rd	Accident	Sun	10/19/2003	8:50	12:06	3:16
I94	EB	Wayne Rd.	Overturned Semi	Tues	10/21/2003	1:14	5:49	4:35
I94	EB	8 Mile	Accident	Wed	10/22/2003	20:29	23:46	3:17
I696	WB	Hoover	Accident	Tues	10/28/2003	7:51	8:07	0:16
I275	SB	I96/I696 Interchange	Accident	Fri	10/31/2003	16:12	19:43	3:31
November 2003								
I94	EB	Michigan	Accident	Sat	11/01/2003	1:26	2:02	0:36
I75	SB	Pennsylvania	Overturned Semi	Mon	11/03/2003	5:15	11:32	6:17
I75	SB	I96	Rollover Accident	Wed	11/05/2003	23:53	2:59	3:06
I94	EB	9 Mile	Jack Knife Semi	Sat	11/08/2003	2:53	4:02	1:09
M10	SB	COBO Hall		Mon	11/10/2003	2:11	3:12	1:01
I96	WB Express	M39	Jack Knife Semi	Tues	11/11/2003	2:41	3:48	1:07
I75	SB	Fisher Fwy	Accident	Wed	11/12/2003	19:46	21:00	1:14
I94	EB	Telegraph	Powerline Down	Thu	11/13/2003	7:26	9:40	2:14
I696	WB	I75	Accident	Thu	11/13/2003	10:36	10:43	0:07
I275	SB	10 Mile	Police Situation	Thu	11/13/2003	13:43	13:57	0:14
I696	EB	Groesbeck	Accident	Thu	11/13/2003	19:51	23:30	3:39
I94	WB	Harper	Accident	Sat	11/22/2003	3:46	8:40	4:54
M14	WB	Sheldon	Overturned Semi	Sat	11/22/2003	8:53	13:06	4:13
I75	NB	Baldwin Rd.	Accident	Sat	11/29/2003	12:16	4:48	7:28
I75	SB	Springwells	Accident	Sat	11/29/2003	4:26	7:44	3:18
I94	WB	Michigan Ave.	Accident	Sat	11/29/2003	4:28	7:25	2:57
December 2003								
I94	WB	Metro Parkway	Accident (Overturned Semi)	Wed	12/03/2003	16:18	21:58	5:40
I75	NB	Clark St.	Accident 3 semi trucks (Hazmat)	Fri	12/05/2003	1:42	5:15	3:33
M10	SB	Evergreen	Accident	Sat	12/06/2003	7:49	7:59	0:10
I94	WB	W. Grand Blvd	Accident	Sat	12/06/2003	11:45	13:56	2:11
M39	NB	Joy Rd.	Accident	Thu	12/11/2003	23:53	0:33	0:40
M10	NB	Chicago	Accident	Sun	12/14/2003	4:16	6:07	1:51
I696	EB	I75	Accident (Fatal)	Sat	12/20/2003	14:16	14:59	0:43
I696	EB	Woodward	Accident	Sat	12/20/2003	15:18	18:08	2:50

M10	SB	Lahser	Accident	Sun	12/21/2003	5:28		
M39	NB	Grand River	Accident	Sun	12/21/2003	5:42	11:30	
I75	SB	Dix	Accident	Wed	12/24/2003	22:16	22:53	
I94	EB	Merriman	Accident	Wed	12/24/2003	22:29	23:22	
M10	NB	Davison	Accident	Thu	12/25/2003	3:45	4:51	
January 2004								
I-96	WB	Beech Daly	Multi-car Accident	Mon	01/05/2004	4:59	5:19	0:20
M-10	NB	I-75	Water Main Break	Sat	01/09/2004	7:37	10:27	2:50
I-275	SB	I-94 EB & WB	Fatal Rollover	Mon	01/12/2004	9:43	11:54	2:11
I-96	WB	Kent Lake	Multiple Accidents	Wed	01/14/2004	11:32	16:14	4:42
I-96	EB	Kent Lake	Multiple Accidents	Wed	01/14/2004	11:32	16:14	4:42
I-96	EB	Newburgh	Multi-car Accident	Sat	01/17/2004	20:12	23:00	2:48
I-96	EB	I-94	Multi-car Accident	Sun	01/18/2004	4:21	4:52	0:31
I-94	WB	I-96 EB	Multiple Accidents	Sun	01/18/2004	4:21	4:52	0:31
I-75	SB	Sashabaw	Multi-car Accident	Tues	01/24/2004	9:18	12:59	3:41
I-75	SB	Rattlalee Lake	Multi-car Accident	Tues	01/24/2004	10:04	12:59	2:55
I-696	EB	Telegraph	Multi-car Accident	Wed	01/25/2004	10:16	10:31	0:15
I-696	EB	Southfield	Multi-car Accident	Fri	01/27/2004	10:27	11:00	0:33
M-39	SB	Outer Dr.	Multi-car Accident	Fri	01/27/2004	10:30	11:06	0:36
February 2004								
I-275	SB	Ann Arbor	Multi-car Accident	Wedensday	02/04/2004	8:24	11:38	3:14
I-96	WB	Outer Dr.	Single Car Accident	Wedensday	02/04/2004	15:09	17:30	2:21
I-696	EB	Couzens	Single Car Accident	Fri	02/06/2004	2:17	3:02	0:45
I-696	WB	Hayes	Single Car Accident	Fri	02/06/2004	2:17	3:02	0:45
I-75	SB	Adams	Multi-car Accident	Thurs	02/12/2004	8:23	10:28	2:05
I-94	EB	I-96 EB	Single Accident	Fri	02/13/2004	17:19	20:49	3:30
I-696	WB	Greenfield	Single Car Accident	Mon	02/22/2004	6:47	9:03	2:16
I-94	EB	Little Mack	Multi-car Accident	Sun	02/22/2004	6:47	9:54	3:07
I-75	SB	I-696 WB	Single Accident	Fri	02/27/2004	10:34	12:25	1:51

I-75	SB	I-696 EB	Single Accident	Fri	02/27/2004	10:52	12:32	1:40
March 2004								
I-94	EB	M-39	Gravel Spill	Wed	03/04/2004	9:40	9:48	0:08
I-96	WB	Beech Daly	Accident	Sun	03/07/2004	19:27	20:04	0:37
I-96	WB	Novi	Accident	Tues	03/16/2004	17:40	19:18	1:38
M-39	NB	Rotunda	Accident	Tues	03/16/2004	19:40	20:17	0:37
I-696	WB	Southfield	Accident	Sat	03/20/2004	13:15	13:59	0:44
I-94	WB	Van Dyke	Accident	Sun	03/21/2004	21:22	23:21	1:59
I-96	EB	I-94 WB	Rollover Semi	Mon	03/24/2004	16:11	20:58	4:47
I-96	WB	I-94 WB	Rollover Semi	Mon	03/24/2004	16:11	20:58	4:47
I-75©	SB	I-75(F) SB	Accident	Wed	03/24/2004	17:35	19:21	1:46
I-75	NB	West	Accident	Fri	03/26/2004	12:45	12:55	0:10
I-94	WB	Outer Dr	Motorcycle Accident	Sat	03/27/2004	22:31	23:23	0:52
I-94	EB	Chalmers	Accident	Tues	03/30/2004	1:50	5:13	3:23
I-94	WB	26 Mile Rd	Accident	Tues	03/30/2004	7:53	9:35	1:42
I-75	SB	Nevada	Bridge Struck	Tues	03/30/2004	13:22	4:41	62:04
I-75	SB	I-696	Bridge Struck	Tues	03/30/2004	14:57	15:20	0:23
I-696	EB	I-75 SB	Bridge Struck	Tues	03/30/2004	14:57	15:20	0:23
I-696	WB	I-75 SB	Bridge Struck	Tues	03/30/2004	14:57	15:20	0:23
I-75	SB	Rouge River	Accident	Wed	03/31/2004	5:38	6:09	0:31
April 2004								
I-75	SB	Fort/Schaefer	Police Situation	Wed	04/07/2004	10:30	10:43	0:13
I-94	WB	Vining	Accident	Wed	04/14/2004	10:16	17:13	6:57
I-696	EB	Mound	Accident	Thurs	04/15/2004	11:30	13:20	1:50
I-696	WB	Southfield	Accident	Thurs	04/15/2004	12:24	14:09	1:45
I-96	WB	Joy	Accident	Sun	04/18/2004	2:51	6:14	3:23
I-96	EB	Telegraph	Accident	Tues	04/20/2004	10:19	13:08	2:49
I-75	SB	Davison WB	Accident	Thurs	04/22/2004	17:11	18:52	1:41
I-75	NB	14 Mile	Accident	Sat	04/24/2004	4:45	7:42	2:57
May 2004								
I-94	EB	12 Mile	Accident	Tues	05/04/2004	3:02	4:02	1:00
I-94	EB & WB	I-75	Overpass Maintence	Thurs	05/06/2004	6:36	12:13	5:37
I-94	EB & WB	I-96	Accident	Thurs	05/06/2004	13:25	14:49	1:24
I-275	NB	8 Mile	Tanker Fire	Thurs	05/06/2004	1:34	2:45	1:11
I-75	NB	I-94	Overpass Maintenance	Thurs	05/06/2004	3:35	12:08	8:33
I-75	SB	Adams	Accident	Thurs	05/13/2004	3:03	8:47	5:44
I-75	NB & SB	W. Grand Blvd	Accident	Fri	05/14/2004	23:04	0:55	1:54
I-75	SB	Huron River	Accident	Sun	05/16/2004	8:32	8:54	0:22
I-75	SB	Davison	Accident	Thurs	05/20/2004	1:59	2:07	0:08
M-39	SB	Outer Dr	Flooding	Fri	05/21/2004	18:33	1:23	5:50
M-10	SB	7 Mile	Flooding	Fri	05/21/2004	17:38	22:12	4:34
M-10	NB	McNichols	Flooding	Fri	05/21/2004	18:05	22:12	4:07

I-94	EB	Grand River	Accident	Sun	05/23/2004	5:40	7:35	1:55
M-10	NB	Davison EB	Accident	Mon	05/24/2004	3:36	4:14	0:38
June 2004								
I-75	NB Fisher	I-75 NB Chry.	Accident	Tues	06/01/2004	11:28	17:05	5:37
I-75	SB	Davison EB	Accident	Tues	06/01/2004	23:53	3:27	3:34
I-96	EB Local	Schaefer	Accident	Wed	06/02/2004	20:33	23:24	2:51
I-94	EB	Cadiuex	Hazmat Situation	Sat	06/05/2004	13:17	15:26	2:09
I-96	EB Local	Greenfield	Accident	Sat	06/05/2004	19:24	21:18	1:54
I-75	NB	Baldwin	Accident	Tues	06/08/2004	15:20	17:58	2:38
I-696	WB	Mohawk	Accident	Wed	06/09/2004	10:23	10:40	0:17
I-75	SB	Caniff	Accident	Thurs	06/10/2004	20:26	21:18	0:52
I-94	WB	Conner	Accident	Mon	06/14/2004	3:06	3:28	0:22
I-75	SB	I-375	Flooding	Wed	06/16/2004	0:00	4:10	4:10
M-10	SB	Bagley	Flooding	Wed	06/16/2004	0:14	4:10	3:56
I-75	NB	M-10 SB	Flooding	Wed	06/16/2004	0:29	4:10	3:41
I-75	SB	M-10 SB	Flooding	Wed	06/16/2004	0:29	4:10	3:41
I-75	NB	I-94 WB	Accident	Thurs	06/17/2004	1:13	2:12	0:59
M-10	SB	I-94 EB	Accident	Thurs	06/17/2004	23:54	1:05	1:11
I-75	NB	Clark	Flooding	Sat	06/19/2004	5:03	5:26	0:23
I-75	NB CDLs	M-10	Flooding	Sat	06/19/2004	22:42	1:44	3:02
I-375	SB	I-75	Flooding	Sat	06/19/2004	22:47	1:47	3:00
M-10	SB	I-75 SB	Flooding	Sat	06/19/2004	23:44	1:45	1:31
I-75	NB	M-10 NB	Accident	Tues	06/22/2004	1:38	3:12	1:34
I-94	WB	M-10 SB	Accident	Wed	06/23/2004	23:26	23:58	0:32
I-94	WB	I-96 WB	Accident	Thurs	06/24/2004	5:14	5:36	0:22
I-96	EB	Outer Drive	Accident	Thurs	06/24/3004	11:06	11:28	0:22
I-96	WB Express	M-39	Accident	Sat	06/26/2004	2:56	3:11	0:15
I-275	SB	I-94 EB & WB	Accident	Sat	06/26/2004	6:47	8:16	1:29
M-10	SB	Davison EB	Accident	Mon	06/28/2004	5:01	5:28	0:27
I-275	NB	8 Mile	Accident	Tues	06/29/2004	18:35	20:10	1:35
July 2004								
I-94	WB	Cass	Accident	Fri	07/02/2004	22:38	22:49	0:11
M-10	SB	Evergreen	Accident	Sat	07/03/2004	21:10	21:50	0:40
I-96	WB	I-275	Accident	Sun	07/04/2004	5:45	11:43	5:58
I-94	WB	Mt. Elliott	Accident	Sun	07/04/2004	18:14	20:23	2:09
M-39	NB	Grand River	Accident	Mon	07/05/2004	0:08	1:14	1:06
I-75	SB	I-696 EB	Accident	Mon	07/05/2004	18:28	19:42	1:14
I-96	EB	Evergreen	Accident	Wed	07/07/2004	4:54	5:00	0:06
M-10	NB	Davison EB	Accident/Semi	Wed	07/07/2004	18:27	20:13	1:46
I-94	WB	I-75	Flooding	Mon	07/12/2004	17:07	20:20	3:13
I-75	SB Chry.	I-75 SB Fisher	Accident	Tues	07/13/2004	11:38	12:58	1:20

I-75	SB	M-59 EB	Accident	Thurs	07/15/2004	22:36	23:12	0:36
I-94	WB	I-75 SB	Accident	Sun	07/18/2004	15:33	19:19	3:46
I-94	WB	Merriman	Accident	Wed	07/28/2004	5:53	7:57	2:04
I-696	WB	I-75 SB	Accident/Semi	Wed	07/28/2004	15:23	17:55	2:32
I-96	EB Local	Wyoming	Accident	Thurs	07/29/2004	0:24	4:00	3:36
I-275	SB	I-96 EB	Accident/Hazmat	Fri	07/30/2004	4:41	10:21	5:40
I-275	NB	I-96 EB	Accident/Hazmat	Fri	07/30/2004	6:07	6:32	0:25
M-14	EB	I-275	Accident/Hazmat	Fri	07/30/2004	6:07	6:32	0:25
I-75	NB	Schaefer	Accident	Fri	07/30/2004	20:13	23:59	3:52
I-94	EB	Mt. Elliott	Accident	Sat	07/31/2004	6:08	9:11	3:03
M-10	NB	Euclid	Accident	Sat	07/31/2004	6:32	6:58	0:26
I-94	EB	M-39 NB	Accident	Mon	7/26/204	20:45	21:12	0:27
I-75	SB	8 Mile	Accident	Mon	712/2004	12:50	13:07	0:17
August 2004								
I-96	WB	M-39 SB & NB	Flooding		08/03/2004	2:08	2:35	0:27
I-94	EB	Michigan	Flooding		08/03/2004	3:02	6:45	3:43
I-94	WB	Gratiot	Jack-knifed Semi		08/04/2004	11:56	12:56	1:00
I-94	EB	M-39	Overturned Semi		08/04/2004	12:19	13:18	0:59
M-10	SB	8 Mile	Accident		08/04/2004	17:50	18:12	0:22
I-75	NB/SB	I-94 EB	Overturned Semi		08/05/2004	23:52	7:47	7:56
I-94	EB	Russell	Overturned Semi/Safety		08/06/2004	0:00	7:49	7:49
I-94	WB	Outer	Accident		08/09/2004	12:37	13:27	0:50
I-94	WB	Middlebelt	Accident		08/09/2004	23:16	23:45	0:29
M-39	SB	Ford	Accident		08/11/2004	13:51	14:08	0:17
M-39	SB	Mc Nichols	Accident		08/13/2004	17:30	17:45	0:15
I-94	WB	I-96	Accident		08/14/2004	10:00	10:22	0:22
M-10	SB	M-39 SB	Accident		08/14/2004	15:05	17:56	2:51
I-75	SB	Crooks	Accident		08/14/2004	22:20	23:45	1:25
I-94	WB	Moross	Accident		08/16/2004	1:01	3:39	2:38
I-275	SB	M-14	Overturned Fire Truck		08/16/2004	19:05	21:04	1:59
I-94	WB	M-39 NB	Accident		08/17/2004	9:39	13:33	3:54
I-94	WB	I-96 WB	Accident		08/18/2004	22:36	8:31	10:07
M-10	SB	I-94 EB	Accident		08/23/2004	19:06	19:37	0:31
I-75	SB	M-10 NB	Accident		08/26/2004	17:00	17:28	0:28
I-696	EB	Mound	Accident		08/27/2004	4:17	4:54	0:37
I-96	EB	Novi	Accident		08/27/2004	15:05	15:44	0:39
I-94	WB	Belleville	Accident		08/27/2004	19:00	19:14	0:14
I-75	SB	Cicotte/Outer	Accident		08/27/2004	19:17	19:44	0:27
I-96	EB	Inkster	Accident		08/28/2004	0:02	0:24	0:22
I-75	SB	9 Mile	Accident involving semi		08/28/2004	7:44	10:14	2:30
I-94	EB	10 Mile	Accident		08/28/2004	8:58	9:16	0:18
I-94	WB	10 Mile	Accident		08/28/2004	9:08	9:22	0:14
I-75	SB	Baldwin	Accident		08/28/2004	14:55	18:56	4:01
I-94	EB	Cadieux	Accident		08/29/2004	9:02	9:42	0:40

I-94	WB	11 Mile	Accident		08/29/2004	11:34	12:05	0:31
I-96	WB Exp	M-39	Flooding		08/29/2004	18:36	20:59	2:23
I-94	WB	I-96	Police Situation		08/29/2004	20:57	1:50	5:47
I-96	WB/E B	I-94	Police Situation		08/29/2004	21:27	1:50	4:47
September 2004								
I-75	NB	I-375 NB	Fuel Spill		09/01/2004	19:09	22:27	3:18
M-10	SB	I-94 WB	Accident		09/01/2004	19:18	19:23	0:05
M-14	EB	Sheldon	Accident		09/03/2004	16:07	19:19	3:12
I-275	SB	M-14	Accident		09/05/2004	23:35	0:36	1:01
I-94	WB	Warren	Accident		09/06/2004	22:31	3:36	6:05
I-94	EB	I-275 NB	Accident		09/08/2004	10:08	13:02	2:54
M-10	SB	I-75	Gas Main Break		09/10/2004	11:15	12:05	0:50
M-10	N/B/S B	M-10 SB	Gas Main Break		09/10/2004	11:15	12:05	0:50
I-75	NB	Mack	Accident		09/12/2004	21:00	22:37	1:37
M-10	SB	M-8	Accident		09/13/2004	11:22	14:07	2:45
I-696	EB	Gratiot	Accident		09/13/2004	13:52	17:14	3:22
I-96	EB	M-8	Overturned Semi		09/13/2004	21:43	5:54	8:11
I-96	WB	M-8	Overturned Semi		09/13/2004	22:26	23:59	1:33
I-96	EB	M-8 LC/Exp	Overturned Semi		09/13/2004	22:56	5:54	7:04
I-75	NB	Telegraph	Accident/Hazmat		09/14/2004	5:50	13:09	7:19
I-75	SB	Clark	Police Situation		09/17/2004	11:09	13:32	2:23
I-94	WB	9 Mile	Debris		09/17/2004	12:09	12:14	0:05
I-94	EB	Telegraph	Overturned Semi		09/18/2004	20:35	5:08	8:43
M-39	SB	Warren	Accident		09/18/2004	23:19	0:45	1:26
M-39	SB	McNichols	Accident		09/19/2004	2:11	6:15	4:04
I-96	WB	10 Mile	Accident		09/19/2004	13:20	16:56	3:36
I-696	EB	I-94 WB	Accident		09/19/2004	15:55	17:01	1:06

APPENDIX C

USER REFERENCE SHEET

MDOT FREEWAY OPERATIONS **V**IDEO**M**ONITOR INTERNET UTILITY

The Michigan Department of Transportation (MDOT) has established an Internet-based utility to permit public safety, transportation, and other government agency representatives access to a subset of the 164 closed-circuit cameras owned and operated by MDOT for real-time freeway traffic surveillance across the Detroit Metro Area. Authorized users have the ability to logon to the VideoMonitor utility from any location using a standard Internet connection and web browser without the need for additional software plug-ins. Camera video streams displayed on the VideoMonitor utility originates from MDOT's Michigan Intelligent Transportation Systems (MITS) Center, and MITS Center control room operators have full access to pan/tilt/zoom controls for each camera in order to view desired subject matter.

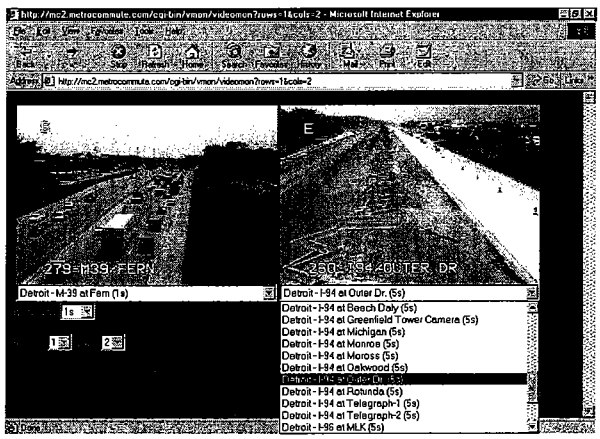
Using the VideoMonitor Utility

1. Open a web browser and enter the following URL: http://metrocommute.com/cgi-bin/vmon/videomon

2. Enter the username and password assigned to your representative agency.

3. Set the desired image array size using the "rows" and "cols" drop-down menus in order to view from 1 to 16 separate video streams on the web page.

4. Enable a video stream display by selecting a preferred freeway location from the list of MDOT cameras listed in the drop-down menu below each established image frame on the web page.

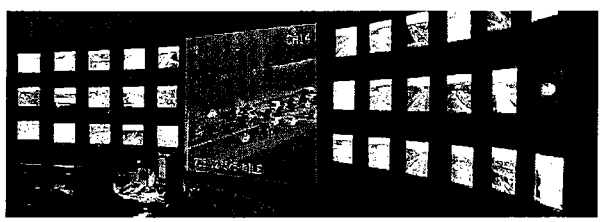


5. Set the desired web browser refresh rate using the "refresh" drop-down menu. The camera description below each image frame drop-down menu specifies the video refresh rate provided by MDOT Freeway Operations.

Communicating with MDOT Freeway Operations

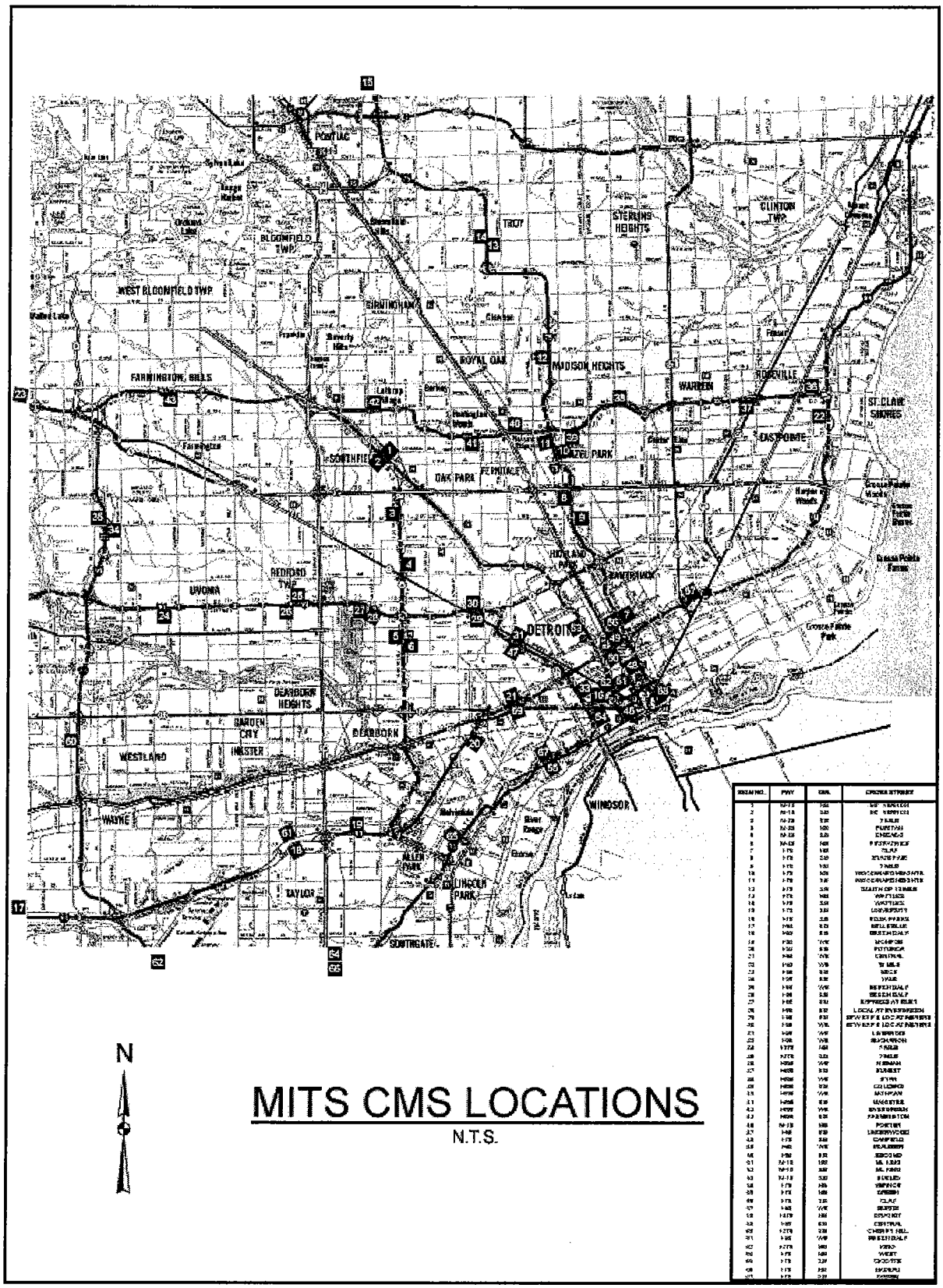
Users of the VideoMonitor utility should contact MDOT Freeway Operations via the 24/7 MITS Center control room to request any camera pan/tilt/zoom operation required for viewing desired subject matter through video displayed on the utility. Complete the following steps:

1. Contact the MITS Center control room via any of the following methods of communication:
   - **Phone:** (313) 965-0777
   - **Nextel Private ID:** 130*44219*16
   - **Fax:** (313) 256-9695
   - **E-mail:** mdot-mitsc-ops@michigan.gov



2. Specify the number and/or location of the camera, as imprinted on the video stream, that you wish to have adjusted (by pan/tilt/zoom) by the responding MITS Center control room operator.
3. Maintain communication with the control room operator until you have obtained a view of the desired subject matter within the viewing capabilities of the MDOT camera.

APPENDIX D


PONTIAC
TROY
STERLING HEIGHTS
CLINTON TWP.
BLOOMFIELD TWP.
WEST BLOOMFIELD TWP.
BIRMINGHAM
ROYAL OAK
MADISON HEIGHTS
WARREN
ROSEVILLE
ST. CLAIR SHORES
FARMINGTON HILLS
SOUTHFIELD
OAK PARK
FERNDALE
HAZEL PARK
GROSSE POINTE WOODS
HIGHLAND PARK
HAMTRAMCK
REDFORD TWP.
LIVONIA
DETROIT
GROSSE POINTE FARMS
GROSSE POINTE PARK
DEARBORN HEIGHTS
GARDEN CITY
INKSTER
DEARBORN
WESTLAND
WINDSOR
WAYNE
ALLEN PARK
LINCOLN PARK
TAYLOR
SOUTHGATE
N
MITS CMS LOCATIONS
N.T.S.